

=====

Sequence Listing was accepted.

If you need help call the Patent Electronic Business Center at (866) 217-9197 (toll free).

Reviewer: Keisha Douglas

Timestamp: [year=2008; month=5; day=23; hr=8; min=16; sec=22; ms=334; ]

=====

Application No: 10589902 Version No: 1.1

**Input Set:**

**Output Set:**

**Started:** 2008-05-23 08:14:08.997  
**Finished:** 2008-05-23 08:14:11.783  
**Elapsed:** 0 hr(s) 0 min(s) 2 sec(s) 786 ms  
**Total Warnings:** 14  
**Total Errors:** 0  
**No. of SeqIDs Defined:** 26  
**Actual SeqID Count:** 26

Error code	Error Description
W 213	Artificial or Unknown found in <213> in SEQ ID (13)
W 213	Artificial or Unknown found in <213> in SEQ ID (14)
W 213	Artificial or Unknown found in <213> in SEQ ID (15)
W 213	Artificial or Unknown found in <213> in SEQ ID (16)
W 213	Artificial or Unknown found in <213> in SEQ ID (17)
W 213	Artificial or Unknown found in <213> in SEQ ID (18)
W 213	Artificial or Unknown found in <213> in SEQ ID (19)
W 213	Artificial or Unknown found in <213> in SEQ ID (20)
W 213	Artificial or Unknown found in <213> in SEQ ID (21)
W 213	Artificial or Unknown found in <213> in SEQ ID (22)
W 213	Artificial or Unknown found in <213> in SEQ ID (23)
W 213	Artificial or Unknown found in <213> in SEQ ID (24)
W 213	Artificial or Unknown found in <213> in SEQ ID (25)
W 213	Artificial or Unknown found in <213> in SEQ ID (26)

SEQUENCE LISTING

<110> WAKITA, Takaji  
KATO, Takanobu  
DATE, Tomoko  
MIYAMOTO, Michiko  
TANABE, Jun-ichi  
SONE, Saburo

<120> NUCLEIC ACID CONSTRUCT CONTAINING FULL LENGTH GENOME OF HUMAN  
HEPATITIS C VIRUS ... AND METHOD OF PRODUCING HEPATITIS C VIRUS  
PARTICLE

<130> 1254-0321PUS1

<140> 10/589,902  
<141> 2006-08-17

<150> PCT/JP2005/003232  
<151> 2005-02-21

<150> JP 2004-045489  
<151> 2004-02-20

<160> 26

<170> PatentIn Ver. 2.1

<210> 1  
<211> 340  
<212> RNA  
<213> Hepatitis C virus

<220>  
<221> misc\_feature  
<222> (1)..(340)  
<223> 5' non-translated region of hepatitis C virus genomic RNA  
derived from JFH-1 clone

<400> 1  
accugcccu aauaggggcg acacuccggcc augaaucacu ccccugugag gaacuacugu 60  
cuucacgcag aaagcgccua gccauggcgu uaguaugagu gucguacagc cuccaggccc 120  
ccccccucccg ggagagccau aguggucugc ggaaccggug aguacaccgg aauugccggg 180  
aagacugggu ccuuuuuugg aaaaaacccac ucuauggccg gccauuuuggg cgugcccccg 240  
caagacugcu agccgaguag cguuggguug ccaaaggccu ugugguacug ccugauaggg 300  
cgcuugcgcag ugccccggga ggucucguag accgugcacc 340

<210> 2  
<211> 573  
<212> RNA  
<213> Hepatitis C virus

<220>  
<221> misc\_feature  
<222> (1)..(573)  
<223> core protein-coding sequence of hepatitis C virus genomic RNA

derived from JFH-1 clone

<400> 2

augagcacaa auccuaaacc ucaaagaaaa accaaaagaa acaccaaccg ucggcccgaa 60  
gacguuaagu ucccgggcgg cggccagauc guuggcggag uauacuuuguu gccgcgcagg 120  
ggccccaggu ugugugugcg cacgacaagg aaaacuuucgg agcgguccca gccacguggg 180  
agacgccagc ccauccccaa agaucggcgc uccacuggca aggccugggg aaaaccagg 240  
cgccccuggc cccuauaugg gaaugagggg cucggcuggg caggauggcu ccuguccccc 300  
cgaggcucuc gccccuccug gggcccccacu gaccccccggc auaggucgcg caacguggg 360  
aaagucaucg acaccuaac guguggcuuu gccgaccuca ugugguacau ccccgucgua 420  
ggcgccccgc uuaguggcgc cgccagagc gucgcgacg gcgugagagu ccuggaggac 480  
gggguuuaauu augcaacagg gaaccuaccc gguuucccu uuucuaucuu cuugcuggcc 540  
cuguuguccu gcaucaccgu uccggucu gcu 573

<210> 3

<211> 576

<212> RNA

<213> Hepatitis C virus

<220>

<221> misc\_feature

<222> (1)..(576)

<223> E1 protein-coding sequence of hepatitis C virus genomic RNA  
derived from JFH-1 clone

<400> 3

gcccagguga agaaauaccag uagcagcuac auggugacca augacugcuc caaugacagc 60  
aucacuuggc agcucgaggc ugcgguuucuc cacguccccc ggugcguuccc gugcgagaga 120  
guggggaaaua cgucacggug uugggugcca gucucgcca acauggcugu gcggcagccc 180  
gugcccuca cgcaaggguu gccggacgcac aucgauaugg uugugauguc cgccaccuuc 240  
ugcucugcuc ucuacguggg ggaccucugu ggcgggguga ugcucgcggc ccagguguuuc 300  
aucgucucgc cgcaquacca cugguuugug caagaaugca auugcuuccau cuacccuggc 360  
accaucacug gacaccgcac ggcgaugggac augaugauga acugugucgac cacggccacc 420  
augauccugg cguacgugau gcgcgucccc gaggucauca uagacaucgu uagcggggcu 480  
cacuggggcg ucauguucgg ciuggccuac uucucuaugc agggagcug ggcgaagguc 540  
auugucaucc uucugcuggc cgcgaggug gacgcg 576

<210> 4

<211> 1290

<212> RNA

<213> Hepatitis C virus

<220>

<221> misc\_feature

<222> (1)..(1290)

<223> E2 protein-coding sequence of hepatitis C virus genomic RNA  
derived from JFH-1 clone

<400> 4

ggcaccacca cgcuuggagg cgcuuugc cguuccacca acgugauugc cggcguguuc 60  
agccauggggc cucagcagaa cauucagcuc auuaacacca acggcaguug gcacaucaac 120  
cguacugccu ugaauugcaa ugacuccuug aacaccggc uucucgcggc cuuguucuac 180  
accaaccgcu uuaacucgc agggugucca gggcgccugu ccgcccugccg caacaucgag 240  
gcuuiuccggc uaggugggg cacccuacag uacgaggaua augucaccaa uccagaggau 300

augaggccgu acugcuggca cuacccccc aagccgugug gcuaguuccc cgcgaggucu 360  
guguguggcc caguacug uuucaccccc agcccgguag uagugggcac gaccgacaga 420  
cguggagugc ccaccuacac auggggagag aaugagacag auguciuuccu acugaacagc 480  
acccgaccgc cgccaggcuc augguuucggc ugcacgugga ugaacuccac ugguuuucacc 540  
aagacuugug gcgccacc uugccgcacc agagcugacu ucaacgcccag cacggacuug 600  
uugugccua cggauuguu uaggaagcau ccugaugcca cuuauauuaa gugugguucu 660  
gggcccuggc ucacacaaa gugccugguc cacuacccuu acagacucug gcauuacccc 720  
ugcacaguca auuuuaccau cuucaagaua agaauguaug uaggggggggu ugagcacagg 780  
cucacggccg caugcaacuu cacucguggg gaucgcugcg acuuggagga cagggacagg 840  
agucagcugu cuccucuguu gcacucuacc acggaauggg ccauccugcc cugcaccuac 900  
ucagacuuac ccgcuuuguc aacuggucuu cuccaccuuc accagaacau cguggaccua 960  
caauacaugu auggccucuc accugcuauc acaaaaucg ucguucgaug ggaguggggug 1020  
guacucuuau uccugcucuu agcgacgccc agagcugcg ccugcuugug gaugcucuac 1080  
uuguuggggcc aggccgaagc agcauuggag aaguuggucg ucuugcacgc ugcgagugcg 1140  
gcuaacugcc auggccuccu auauuuugcc aucuucuucg ugugcagcuug gcacaucagg 1200  
ggucgggugg ucccuugac caccuauugc cucacuggcc uauggccuuu cugccuacug 1260  
cucauggcac ugccccggca ggcuuaugcc 1290

<210> 5  
<211> 651  
<212> RNA  
<213> Hepatitis C virus

<220>  
<221> misc\_feature  
<222> (1)..(651)  
<223> NS2 protein-coding sequence of hepatitis C virus genomic RNA  
derived from JFH-1 clone

<400> 5  
uaugacgcac cugugcacgg acagauaggc guggguuugu ugauauugau caccucuuc 60  
acacucaccc cggguauuaa gacccuccuc gcccaguguc uguggugguu gugcuauuc 120  
cugacccugg gggaaagccau gauucaggag ugguuaccac ccaugcaggu gcgcggcggc 180  
cgcgauuggca ucgcgugggc cgucacuaua uucugccgg gugugguguu ugacauuacc 240  
aaauggccuu uggcguugcu uggccugcu uaccucuuaa gggccgcuuu gacacaugug 300  
ccguacuucg ucagagcuca cgucucugaua aggguaugcg cuuuggugaa gcagcucgcg 360  
ggggguaggu auguucaggu ggccuauug gcccuiuggca gguggacugg caccuacauc 420  
uaugaccacc ucacaccuau gucgacugg gccgcuagcg gccugcgcga cuuagcgguc 480  
gccguggaac ccaucaucuu caguuccgaug gagaagaagg ucaucgucug gggagcggag 540  
acggcugcau guggggacau ucuacauugga cuuuccgugu ccgccccacu cggccaggag 600  
auccuccucg gcccagcuga ugguuacacc uccaaggggu ggaagcuccu u 651

<210> 6  
<211> 1893  
<212> RNA  
<213> Hepatitis C virus

<220>  
<221> misc\_feature  
<222> (1)..(1893)  
<223> NS3 protein-coding sequence of hepatitis C virus genomic RNA  
derived from JFH-1 clone

<400> 6  
gcucccauca cugcuuaugc ccagcaaaca cgaggccucc ugcccgcguu aguggugagu 60

augacggggc gugacaggac agaacaggcc ggggaagucc aaaucuguc cacagucu 120  
caguccuucc ucggacaac caucucggg guuuugugga cguuuuacca cggagcuggc 180  
aacaagacuc uagccggcuu acgggguccg gucacgcaga uguacucgag ugcugaggg 240  
gacuugguag gcuggccccag ccccccuggg accaagucuu uggagccgug caagugugga 300  
gccgucgacc uauaucuggu cacgcggAAC gcugauguca ucccgccucg gagacgcggg 360  
gacaagcggg gagcauugcu cucccccggaa cccauuuucga cciugaaggguccucggg 420  
gggcccggugc ucugccuug cggccacguc guugggcucu uccgagcagc ugugugcucu 480  
cggggcgugg ccaaauccau cgauuuucauc cccguugaga cacucgcacgu uguuacaagg 540  
ucuccccacuu ucagugacaa cagcacgcca cccgcugugc cccagaccua ucaggucggg 600  
uacuugcaug cuccaacugg caguggaaag agcaccaagg uccugucgc guaugccgccc 660  
cagggguaca aaguacuagu gcuuaacccc ucgguaugcug ccacccuggg guuuggggcg 720  
uaccuaaucca aggacacauugg caucaauccc aacauuagga cuggagucag gaccguug 780  
accggggagg ccaucacqua cuccacauau ggcaauuuuc ucggccgaugg gggcugcgcu 840  
agcggcgccu augacaucu cauaugcga gaaugccacg cuguggaugg uaccuccauu 900  
cucggcaucg gaacgguccu ugaucaagca gagacagccg ggucagacu aacugugcug 960  
gcuacggcca caccccccgg gucagugaca acccccauc ccgauauaga agagguaggc 1020  
cucggggggg aggugagau ccccuucuau gggagggcga ucccccuauc cugcaucaag 1080  
ggaggggagac accugauuuu cugccacuca aagaaaaagu gugacgagc cgccggcgcc 1140  
cuucggggca ugcccugugaa ugcccugugc uacuauagag gguuggacgu cuccauaaua 1200  
ccagcucagg gagauguggu ggucgucgccc accgacgccc ucaugacggg guacacugga 1260  
gacuuugacu ccgugaucga cugcaaugua gcccaccaag acgcugucuc acgcagucag 1320  
gacccaccu ucacuauaac cacacagacu gucccacaag acgcugucuc acgcagucag 1380  
cgccgcgggc gcacagguag aggaagacag ggcacuuuaa gguauuuuc cacuggugaa 1440  
cgagccucag gaauguuuga caguguagug cuuugugagc gcuacgacgc aggggcugcg 1500  
ugguacgauc ucacaccagg ggagaccacc gucaggcuua gagcguauuu caacacgccc 1560  
ggccuacccg uguguacaaga ccaucuugaa uuuugggagg caguuuucac cggccucaca 1620  
cacauagacg cccacuuccu cucccaaaca aagcaagcgg gggagaacuu cgccuaccua 1680  
guagccuacc aagcuacggu gugccgaga gccaaggccc cucccccgcu cugggacgccc 1740  
auguggaagu gccuggcccg acucaagccu acgcuugcgg gccccacacc ucuccuguac 1800  
cgguuggggcc cuauuaccaa ugaggucacc cucacacacc cugggacgaa guacauccgccc 1860  
acaugcaugc aagcugaccu ugaggucuacc acc 1893

<210> 7  
<211> 162  
<212> RNA  
<213> Hepatitis C virus

<220>  
<221> misc\_feature  
<222> (1)..(162)  
<223> NS4A protein-coding sequence of hepatitis C virus genomic RNA  
derived from JFH-1 clone

<400> 7  
agcacguggg uccuagcugg aggaguccug gcagccgucg ccgcauauug ccuggcgcacu 60  
ggaugcguuu ccaucaucgg cccguugcact guaaccagc gagucgcgu ugcggccggau 120  
aaggaggucc uguauugaggc uuuugauugag auggagggaaau gc 162

<210> 8  
<211> 783  
<212> RNA  
<213> Hepatitis C virus

<220>  
<221> misc\_feature

<222> (1) .. (783)

<223> NS4B protein-coding sequence of hepatitis C virus genomic RNA  
derived from JFH-1 clone

<400> 8

ggcucuaggg	cggcucuau	cgaagagggg	cagcggaug	ccgagaaugu	gaaguuccaa	60
auccaaggc	ugcugcagc	ggccucuaag	caggcccagg	acauacaacc	cgcuaugcag	120
gcuucauggc	ccaaagugga	acaauuuugg	gccagacaca	uguggaacuu	cauuagcggc	180
auccaauacc	ucgcaggauu	gucaacacug	ccagggaaacc	ccgcgguggc	uuccaaugaug	240
gcauucagug	ccgcccucac	caguccguug	ucgaccagua	ccaccauccu	ucucaacauc	300
augggaggcu	gguuagcgc	ccagaucgca	ccacccgccc	ggggccacccg	cuuugucguc	360
aguggccuugg	ugggggcugc	cgugggcagc	auagggcugg	guaaggugc	gguggacauc	420
cuggcaggau	auggugcggg	cauuucgggg	gcccucgucg	cauucaagau	caugucuggc	480
gagaagccu	cuauggaaga	ugucaucaa	cuacugccug	ggauccugc	uccgggagcc	540
cugguggugg	gggucaucug	cgcggccauu	cugcgccgccc	acguggggacc	gggggagggc	600
gcgguccaa	ggaugaacag	gcuuauugcc	uuugcuiucca	gaggaaacca	cgcgcuccu	660
acucacuacg	ugacggaguc	ggaugcgcug	cagcguguga	cccaacuacu	uggcucucuu	720
acuauaaacca	gcuuacucag	aagacuccac	aaauuggaua	cugaggacug	ccccauccca	780
ugc						783

783

<210> 9

<211> 1398

<212> RNA

<213> Hepatitis C virus

<220>

<221> misc\_feature

<222> (1)..(1398)

<223> NS5A protein-coding sequence of hepatitis C virus genomic RNA  
derived from JFH-1 clone

<400> 9

uccggauccu ggcucccgcgac cguguggggac uggttggggca ccaucuugac agacuuucaaa 60  
 aauuggcuga ccucuaaauu guucccccaag cugcccgccc ucccccuaucu cucuugucaaa 120  
 aaggggguaca agggugugug ggccggcacu ggcaucauga ccacgcgcug cccuugcggc 180  
 gccaacaucu cuggcaaugu ccgcccugggc ucuauugagga ucacaggggc uaaaaccugc 240  
 augaacaccu ggcaggggac cuuuccuauc aauugcuaca cggaggggcca gugcgcccg 300  
 aaaccccccga caacuacaa gaccgccauc uggtgggggg cggccucggc guacgcggag 360  
 gugacgcagc auggggucua cuccuaugua acaggacuga ccacugacaa ucugaaaaauu 420  
 cciuugccaaac uaccuucucc agaguuuuuuc uccuggggugg acggugugca gauccauagg 480  
 uuugcaccca caccaaagcc guuuuuccgg gaugaggugu cguucugcgu uggttgggg 540  
 uccuaugcug ucggguccca gciuucccugu gaaccugagc cgcacgcaga cguauugagg 600  
 uccaugcuaa cagaauccgccc ccacaucacg gcggagacug cggcgccggc cuuggccacgg 660  
 ggaucaccuc caucugagggc gagcuccuca gugagccagc uaucagcacc gucgugccgg 720  
 gccaccugca ccacccacag caacaccuaa gacguggaca uggttggggca gacccugcuc 780  
 auggagggcg guguggcua gacagagccu gaguccaggg uggttggggca gacccugcuc 840  
 gagccaaugg ccgaggaaga gagcgaccuu gagcccucaa uaccaucggc gugcaugcuc 900  
 cccaggaggcg ggguuuccacg ggccuuaccg gciuugggcac ggccugacua caaccggccg 960  
 cucguggaaau cguggaggag gcccagauuac caaccggccc cggugcugg uugugcucuc 1020  
 ccccccggccca agaaggcccc gacgcccuccc ccaaggagac gcccggacagu gggucugagc 1080  
 gagagcacca uaucagaagc ccuccagcaa cugggcauca agaccuuugg ccagccccc 1140  
 ucgagcgug augcaggecuc guccacgggg gcggggccgg cggaaucggc cgguccgacg 1200  
 ucccccugug agccggcccc cucagagaca gguuccggccu ccucuaugcc ccccccucgag 1260  
 ggggagccug gagauccggc ccuggagacu gaucagguaag agcuucaacc ucccccggcag 1320  
 ggggggggggg uagcuccccgg uucggggcucg gggucuuggu cuacuugcuc cgaggaggac 1380  
 gauaccaccg uguugcugc 1390

<210> 10  
<211> 1773  
<212> RNA  
<213> Hepatitis C virus

<220>  
<221> misc\_feature  
<222> (1)..(1773)  
<223> NS5B protein-coding sequence of hepatitis C virus genomic RNA  
derived from JFH-1 clone

<400> 10  
uccaugucau acuccuggac cggggcucua auaacuccu guagccccga agaggaaaag 60  
uugccaaauca acccuuugag uaacucgcug uugcgauacc auacaagggu guacuguaca 120  
acaucaaaga gcgccucaca gagggcuaaa aagguaacuu uugacaggac gcaagugcuc 180  
gacgccccauu augacucagu cuuaaaggac aucaagcuag cggcuuccaa ggucagcgca 240  
aggcuuccuca ccuuggagga ggcgugccag uugacuccac cccauucugc aagauccaaag 300  
uauggauucg gggccaaggga gguccgcagc uuguccggga gggccguuaa ccacaucaag 360  
uccgugugjaggaggaccu ggaaagaccca caaacaccaa uucccacaac caucauggcc 420  
aaaaaaugagg uguucugcgu ggaccccgcc aaggggggua agaaaaccagc ucgcccuauc 480  
guuuacccug accucggcgu cccggcugc gagaaaaugg cccucuauga cauuacaccaa 540  
aagcuuccuc aggcgguauu gggagccuucc uauggcuucc aguacuccccc ugcccacgg 600  
guggagauuc ucuugaaagc auggggcgaa aagaaggacc ccauggguuu uucguauugau 660  
acccgaugcu ucgacucaac cgucacugag agagacauca ggaccgagga guccauauac 720  
caggccugcu cccugcccgaa ggaggcccgc acugccauac acucgcugac ugagagacuu 780  
uacguaggag ggcccuauguu caacagcaag ggucaaaccu gcgguuacag acguugccgc 840  
gccagcggg ugcuaaccac uagcaugggu aacaccauca caugcuauug gaaagccua 900  
gccccugca aggcuugcgaa gauaguugcg cccacaaugc ugguaugcgg cgaugaccua 960  
guagucaucu cagaagccaa gggacugag gaggacgagc ggaaccugag agccuucacg 1020  
gaggccauga ccagguacuc ugcuccuucu ggugaucccc ccagaccgga auaugaccug 1080  
gagcuauuaa cauccuguuc cuaaaaugug ucuguggcgu uggcccgccg gggccgcccgc 1140  
agauacuacc ugaccagaga cccaaaccacu ccacucgccc gggcugccug ggaaacaguu 1200  
agacacuccc cuaucaauuc auggcugggaa aacaucaucc aguaugcuucc aaccauaugg 1260  
guucgcaugg uccuaugac acacuucuuc uccauucuca ugguccaaga cacccuggac 1320  
cagaaccuca acuuugagau guauggauca guauacccg ugaauuccuu ggaccuuucca 1380  
gccauuaauug agagguuaca cgggcuugac gccuuuucua ugcacacaua cucucaccac 1440  
gaacugacgc gggugcuiuc agcccucaga aaacuugggg cggcacccu cagggugugg 1500  
aagagucggg cucgcgcagu cagggcgucc cuaucuccc guggagggaa agcggccguu 1560  
ugcggccgau auctucucaa uuggggcgug aagaccaagc ucaaacucac uccauugccg 1620  
gaggcgccgccc uacuggacuu auccaguugg uucaccgucg gcccggccgg gggcgacauu 1680  
uuucacagcg ugucgcgcgc cccgaccccg ucauuacucu ucggccuacu cccuacuuuuc 1740  
guagggguag gccucuuuccu acuucccgcu cgg 1773

<210> 11  
<211> 239  
<212> RNA  
<213> Hepatitis C virus

<220>  
<221> misc\_feature  
<222> (1)..(239)  
<223> 3' non-translated region of hepatitis C virus genomic RNA  
derived from JFH-1 clone

<400> 11

uagagcggca cacacuaggua acacuccaua gcuaacuguu cccuuuuuuuu uuuuuuuuuuu 60  
uuuuuuuuuu uuuuuuuuuuu uuuuuuuuuuu cccucuuuuu ucccuuucu 120  
ucuuauucua cuuuuuuuuu ugguggcucc aucuuagccc uagucacggc uagcugugaa 180  
agguccguga gccgcaugac ugcagagagu gccguuacug guucucucugc agaucaugu 239

<210> 12

<211> 9707

<212> RNA

<213> Hepatitis C virus

<220>

<221> misc\_feature

<222> (1)..(9707)

<223> full-length Hepatitis C virus genomic RNA derived from JFH-1  
clone

<400> 12

gaauucuaau acgacucacu auagaccugc cccuaauagg ggcgacacuc cgccaugaaau 60  
cacuccccug ugaggaacua cuuguucac gcagaaagcg ccaugccaug gcguuaguau 120  
gagugucgua cagccuccag gcccccccu cccgggagag ccauaguggu cuugccgaaacc 180  
ggugaguaca ccggaaauugc cgggaagacu ggguccuuuc uggauaaac ccacucuaug 240  
cccgcccauu uggggcugcc cccgcaagac ugcuagccga guagcguugg guugcggaaag 300  
gccuuguggu acugccugau agggcgcuug cgagugccccc gggaggucuc guagaccgug 360  
caccaugagc acaaauccua aaccucaaag aaaaaccaaag agaaaacacca accgucgccc 420  
agaagacgaa aaguucccg gcggcgccca gaucguuggc ggaguauacu uguugccg 480  
caggggcccc agguuggug ugcccacgc aaggaaacu ucggagcggu cccagccacg 540  
ugggagacgc cagcccaucc ccaaagaucg gcgcuccacu ggcaggccu gggaaaaacc 600  
agguegcccc uggcccuau auggaauga gggacucggc uggcaggau ggcuccuguc 660  
cccccgaggc ucucggcccu ccuggggccca cacugacccc cggcauaggc cgcccaacgu 720  
ggguuaaguc auctgacaccc uaacgugug cuuugccgac cucauggggu acauccccgu 780  
cguaggcgcc cgcuuaugug gcgcgcgcag agcugucgcg cacggcggaa gaguccugga 840  
ggacgggguu auuuaugcaa caggaaaccu acccgguuuc cccuuuuucua uciuuiuugcu 900  
ggcccuguuu uccugcauca cccguuccggu cucugcugcc caggugaaga auaccaguag 960  
cagcuacaug gugaccaaau acugcuuccaa ugacagcauc acuuggcagc ucggggcugc 1020  
gguucuccac gucccccggu gcgucccgug cgagagagug gggauuacgu cacgguguug 1080  
ggugccaguc ucgccaaaca ugugcugugcg gcagcccggu gcccucacgc agggucugcg 1140  
gacgcacauac gauauggug ugauugccgc caccuuucugc ucugcucucu acguggggga 1200  
ccucuguggc gggugugauc cccggggccca gguguucauc guucgcggc aguaccacug 1260  
guuugugcaa gaaugcaauu gcuccaucua cccuggcacc aucacuggac accgcauggc 1320  
augggacaug augaugaacu ggucgcccac gcccaccaug auccuggcgu acgugauagcg 1380  
cgucccccggag gucaucauag acaucguuag cggggcucac ugcccgcguca uguucggcui 1440  
ggccuacuuc ucuauugcagg gaggcgugggc gaagggucauu gucauccuuc ugcuggccgc 1500  
ugggguggac gcgggcacca ccacccguugg aggccgcuguu gcacguucca ccaacggcag 1560  
ugccggcgug uucagccaaug gcccucagca gaacauucag cucauuaaca ccaacggcag 1620  
uuggcacauc aaccguacug cciuugaauug caaugacucc uugaacaccg gciiuucucgc 1680  
ggccuuguuuc uacaccaacc gcuuuaacuc gucagggugu ccaggccgccc ugucggccug 1740  
ccgcaacauc gagggcuiucc ggauagggug gggcacccua caguacgagg auaaugucac 1800  
caauccagag gauauggagc cguacugcug gcacuacccc ccaaagccgu guggcguagu 1860  
cccccgagg ucugugugug gcccagugua cguuucacc cccagccgg uaguaguggg 1920  
cactgaccgac agacguggag ugcccaccua cacaugggga gagaauagaga cagaugucuu 1980  
ccuacugaac agcaccgac cgccgcaggc cucaugguuc ggugcgcacgu ggau